

SOMATIC COMORBIDITIES AND MORTALITY IN SCHIZOPHRENIA

Istvan Bitter

*Department of Psychiatry and Psychotherapy, Semmelweis University Balassa u. 6,
1083 Budapest, Hungary*

Schizophrenia is associated with high morbidity as compared to the general population or to matched controls. The aim of this presentation is to address the roll of somatic comorbidities in the high mortality rates of patients with schizophrenia.

Recent mortality data will be presented based on the analyses of nationwide full population registries (Canada (Gatov et al. 2017) and Hungary (Bitter et al. 2017)) or large cohorts. The roll of antipsychotic treatment in the survival of patients with schizophrenia will be presented by using nationwide, registry based data from Finland (Tiihonen et al. 2009) and Sweden (Tiihonen et al. 2015).

The Hungarian nationwide data show a 2.4 times increased risk of death in schizophrenia as compared to matched (age, sex and postal code) controls; the Canadian nationwide data show, that “mortality rates among people with schizophrenia were 3 times higher than among those without schizophrenia”. The Hungarian data indicate a large risk increase in the younger groups of patients (RR=13 below the age of 20 years and RR=6.4 in the age group >20 - <40 years). While the sex ratio of mortality rates in schizophrenia has a similar pattern as in the general population (higher mortality for males than females), the risk increase of death of female patients with schizophrenia is higher those of male patients. The largest increases in the risk of death as compared to matched controls were found in the case of the following comorbidities: Acute lower respiratory infections; External causes of morbidity and mortality (according to the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10)-WHO Version, 2016); Other infections; Neoplasms. Based on Finish and Swedish nationwide data anti-psychotic treatment as compared to no antipsychotic treatment decreases mortality in schizophrenia.

The large increase of comorbidities and the higher rate of mortality associated with comorbidities in schizophrenia call for an improvement of graduate and postgraduate medical education and training and for new preventive actions, such as smoking cessation programs for patients with schizophrenia.

References:

1. Gatov E, et al.: *Canadian Medical Association Journal* 2017; 189:E1177-E1187
2. Bitter I, et al.: *European Psychiatry* 2017; 45:97-103
3. Tiihonen J, et al.: *Lancet* 2009; 374:620-627
4. Tiihonen J, et al.: *American Journal of Psychiatry* 2015; 173:600-606

* * * * *

GUT-BRAIN-AXIS - MICROBIOME IN AFFECTIVE DISORDERS

Reininghaus E, Wetzlmair L, Fellendorf FT, Platzer M, Queissner R, Birner A, Pilz R, Hamm C, Maget A, Prettenhofer A, Klampfer K, Ferk K, Kapfhammer HP & Dalkner N

*University Hospital of Psychiatry and Psychotherapeutic Medicine, Medical University of Graz,
Auenbruggerplatz 31, 8036 Graz, Austria*

The gut microbiota is well known for its role on well-being and health (Fung et al. 2017). Most importantly, the gut microbiota is not only responsible for gastrointestinal homeostasis and digestion. Microbiota and dietary components may affect disease pathogenesis by neural, endocrine and immune pathways (Salagre et al. 2017). Release of pro-inflammatory cytokines, increased intestinal permeability (so called “leaky gut”), and alterations of immune response are examples how chronic inflammatory pathways leading to disturbances in mental health, can be activated and mediated by microbiota and their products (Sturgeon & Fasano 2016). Furthermore, the digestive system is the producer of more than 90% of serotonin in our organism and may therewith play a major role in mental diseases (Salagre et al. 2017). According to recent research, the microbiota are likely to have effects on brain function and behaviour, including affect, motivation and higher cognitive functions (Ait-Belgnaoui et al. 2014, Alamet al. 2017, Frohlich et al. 2016, Wallace & Milev 2017). Furthermore, in animal-based research, the beneficial influence of intestinal microbes on brain development and microglia function was evident (Hoban et al. 2017, Lowry et al. 2016). An imbalance of the communication between gut microbiota and the CNS may therewith lead to neuropsychiatric disorders such as depression (Ait-Belgnaoui et al. 2014, Evrensel & Ceylan 2015).

A strategy to examine the role of the microbiome in different diseases is the intake of supplements that modulate the gut microbiome. Probiotics are defined as living micro-organisms that reconstitute the gastrointestinal barrier (Huang et al. 2016). If taken in certain amounts, some evidence suggests

beneficial health status and decrease of potentially pathogenic gut bacteria as well as positive influence on the immune system (Dinan & Cryan, 2013, Huang et al. 2016, Mangiola et al. 2016). Nevertheless, studies on probiotics in individuals with psychiatric disorders are currently rare. Hitherto studies merely examined the mechanisms of probiotic supplements and psychiatric symptoms in animal experiments and healthy individuals (Evrensel & Ceylan 2015, Mangiola et al. 2016, Wallace & Milev 2017).

Data of the “ProbioBIP-one” pilot-study in euthymic individuals with Bipolar Disorder will be presented at the speech.

References:

1. Ait-Belgnaoui A, Colom A, Braniste V, Ramalho L, Marrot A, Cartier C, Tompkins T: Probiotic gut effect prevents the chronic psychological stress-induced brain activity abnormality in mice. *Neurogastroenterology and Motility* 2014; 26:510-520
2. Alam R, Abdolmaleky HM, Zhou JR: Microbiome, inflammation, epigenetic alterations, and mental diseases. *American Journal of Medical Genetics. Part B, Neuropsychiatric Genetics* 2017; 174:651-660
3. Dinan TG, Cryan JF: Melancholic microbes: A link between gut microbiota and depression? *Neurogastroenterology and Motility* 2013; 25:713-719
4. Evrensel A, Ceylan ME: The gut-brain axis: The missing link in depression. *Clinical Psychopharmacology and Neuroscience* 2015; 3:239-244
5. Frohlich EE, Farzi A, Mayerhofer R, Reichmann F, Jacan A, Wagner B, Holzer P: Cognitive impairment by antibiotic-induced gut dysbiosis: Analysis of gut microbiota-brain communication. *Brain, Behavior, and Immunity* 2016; 56:140-155
6. Fung TC, Olson CA, Hsiao EY: Interactions between the microbiota, immune and nervous systems in health and disease. *Nature Neuroscience* 2017; 20:145-155
7. Hoban AE, Stilling RM, Moloney G, Shanahan F, Dinan TG, Clarke G, Cryan JF: The microbiome regulates amygdala-dependent fear recall. *Molecular Psychiatry* 2017; doi:10.1038/mp.2017.100
8. Huang R, Wang K, Hu J: Effect of probiotics on depression: A systematic review and meta-analysis of randomized controlled trials. *Nutrients* 2016; 8. 10.3390/nu8080483. doi:10.3390/nu8080483
9. Lowry CA, Smith DG, Siebler PH, Schmidt D, Stamper CE, Hassell JE, Jr, Rook GA: The microbiota, immunoregulation, and mental health: Implications for public health. *Current Environmental Health Reports* 2016; 3:270-286
10. Mangiola F, Ianiro G, Franceschi F, Fagioli S, Gasbarrini G, Gasbarrini A: Gut microbiota in autism and mood disorders. *World Journal of Gastroenterology* 2016; 22:361-368
11. Salagre E, Vieta E, Grande I: The visceral brain: Bipolar disorder and microbiota. [El cerebro visceral: trastorno bipolar y microbiota] *Revista De Psiquiatria y Salud Mental* 2017; 10:67-69
12. Sturgeon C, Fasano A: Zonulin, a regulator of epithelial and endothelial barrier functions, and its involvement in chronic inflammatory diseases. *Tissue Barriers* 2016; 4:e1251384
13. Wallace CJK, Milev R: The effects of probiotics on depressive symptoms in humans: A systematic review. *Annals of General Psychiatry* 2017; 16:14-017-0138-2. eCollection 2017

* * * * *

WORKSHOP: DEMENTIA: SOMA IS LOOKING FOR PSYCHE - TREATMENT OF DEMENTIA AS A COMPLEX PSYCHIATRIC AND SOMATIC-MEDICAL CHALLENGE

Alexis Matzawrakos¹ & Martin Enge²

¹ *Beratungsstelle für seelische Gesundheit im Alter, Plüddemanngasse 33, 8010 Graz, Austria*

² *Abteilung für Alterspsychiatrie und Alterspsychotherapie, LKH Graz-Südwest - Standort Süd, Wagner Jauregg Platz 17, 8053 Graz, Austria*

Realising that we may break new ground by looking at the treatment of dementia in a multidimensional way, the almost defeatist perspective (‘Can we do anything at all?’, ‘Anyway, dementia is not curable!’...) must be met head-on.

Studies that focus on the social psychiatric and psychodynamic aspects of dementia give rise to hope, such as the article ‘Social psychiatric aspects of dementia’ by Psota (2015), studies highlighting psychosocial interventions (Patel et al. 2014, Kasl-Godley & Gatz 2000), studies regarding psychotherapy for dementia (Hirsch 2001, Wolf 2017), but also the scientifically very controversial concept of validation (Feil & Altman 2004), which seem to work well according to our experience.

In the end, the treatment of dementia needs a so called ‘package-solution’: of course anti-dementia drugs, best medical treatments in any case (a matter of quality of life, but also of the blood circulation of an atrophic brain), physiotherapy, ergotherapy, dietology, logopedics, orthoptics, supply of hearing aids, but also social psychiatric measures like support of relatives, easing the burden of the caregiving, specialised diagnosis and advisory centre like the GPZ (Geronto Psychiatrisches Zentrum - Geriatric